


1986

# The effects of alcohol advertising on youth attitudes toward drinking and driving: a preliminary study

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The effects of alcohol advertising on youth attitudes  
toward drinking and driving: A preliminary study

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by

David Glenn Miller

A Thesis Submitted to the  
Graduate Faculty in Partial Fulfillment of the  
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Signatures have been redacted for privacy

Iowa State University  
Ames, Iowa

1986

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## DEDICATION

This master's thesis is dedicated to my mother, Mary Alice, whose love, encouragement, support, and guidance made it all possible for me to continue my education. It is truly indeed a privilege to call you mother because you've stuck by me through thick and thin, no matter what the situation may have been, you were always there. At this point, the author would like to thank her for the many contributing factors which are accredited to the completion of this thesis, including the many motivating telephone calls, the financial support, and most of all believing in me. Again, thank you. May God bless and keep you always in his care.

## CHAPTER I. INTRODUCTION

Drinking and driving has received more careful research than other alcohol related problems. One thing this research tells us is that alcohol advertising appears to contribute to certain forms of problem drinking (Atkin et al., 1983). Another is that there is a moderately positive correlation between the amount of day to day exposure to beer, wine, and liquor ads and both excessive alcohol consumption and drinking in hazardous contexts such as automobile driving (Atkin et al., 1983).

Evidence indicates that advertising stimulates consumption levels, which in turn leads to heavy drinking and to driving in dangerous situations (Atkin et al., 1983, p. 313).

Alcoholic beverages are advertised on many radio and TV programs which draw their audience because of their content. In fact, the programs associated with alcoholic beverage advertising are so varied that they are likely to be encountered by most people. From TV sports games to news and drama, in the ever-present spot commercials, in magazine ads and on billboards, advertisements for alcoholic beverages and other products assail almost everyone, including children. Producers of alcoholic beverages also get a considerable amount of free advertising from the media, as do producers of cars and cigarettes, in that these products are used in films, plays, stories, and other entertainment features (McCarty, 1964).

In terms of exposure, mass-media advertising of alcoholic beverages probably reaches a large proportion of the available audience (McCarty, 1964). It is possible for these ads to have a much more significant impact than any other ads.

However, important questions must be raised about the effectiveness of mass appeals in changing the opinions and behaviors of the people they reach. There are many factors which work against these communications. For example, the exposures are clearly incidental to the person's main purpose in attending to the medium (McCarty, 1964). While this may make it seem logical to discount their having an effect upon attitudes or behavior, there is no factual basis for doing so (McCarty, 1964).

McCarty (1964) noted that advertisements and entertainment materials frequently depict alcoholic beverages and their use. However, alcoholic beverages do not differ from other goods and services offered to the public. All major industries engage in sales promotion through the mass media. He also stated that advertising techniques in every field are skillfully designed and well-budgeted, and alcoholic beverage industry program is no exception.

Each year, there are thousands of alcohol advertisements available to audiences of the mass media (Atkin and Block, 1982). According to industry statistics for 1977, a total of \$411 million was spent on national advertising; the largest proportion

is for beer (48%, mostly on television), followed by liquor (39%, mostly in magazines), and wine (13%, evenly distributed). Network TV carried about 5000 beer and 600 wine ads in 1977, mostly during evening prime-time and weekend sports programs (Atkin and Block, 1982). Examination of one issue per month of 41 general and specialized magazines shows that more than 1000 ads appeared in the eight-month period beginning July 1978. Extrapolating to the full year and issues of magazines published more than once a month, it is estimated that these magazines carry approximately 125 beer ads, 160 wine ads, and 2650 liquor ads per year (Atkin and Block, 1982). According to Atkin and Block (1982), there are several reasons why alcohol advertising might be expected to produce drinking by youth: ads may reduce inhibitions that restrict the consumption of alcohol by showing that this activity is socially acceptable and normative in society; ads may persuade non-drinkers or occasional drinkers to consume more alcohol by portraying rewarding consequences such as romance/sociability, masculinity/femininity, and escape; famous or attractive characters in ads may influence impressionable young people to model their behavior; and advertising may stimulate regular consumers to acquire and drink more alcohol, by a simple reminder to act (Atkin and Block, 1982). On the other hand, advertising impact may be outweighed by peer influence, or minimized by countervailing social persuasion or personal



resistance to advertising appeals (Atkin and Block, 1982).

Several countries have banned certain alcohol advertising practices, and the United States Senate Subcommittee on Alcoholism and Narcotics hearing raised policy relevant questions concerning the effects of these messages (Atkin et al., 1983, p. 314).

It was asserted that many millions of American youth are bombarded every day with thousands of messages about drinking from hundreds of glamorous, friendly, healthy, adventuresome, sexy, even famous people telling them the joys and benefits of drinking (Atkin et al., 1983). This question was raised:

...how much of it is actually designed to encourage non-drinkers to start drinking, and to encourage moderate drinkers to drink more (Atkin et al., 1983, p. 314).

According to a study by the U.S. Department of Transportation 1983, drinking and driving among high school youth is no more of a problem now than it was in the past decade. This study indicates that there is no significant increase in the percentage of students who drink and drive or the incidence of students with drinking and driving related problems (Alcohol and Drug Administration, 1983). Studies show that there is no significant difference in these drinking and driving patterns of freshmen and seniors, indicating that imbibing remains fairly constant throughout the high school years (Alcohol and Drug Administration, 1983).

This study seeks to discover if teenagers who drink are more aware of alcohol advertising than teenagers who do not drink; if

teenagers with a high awareness of alcohol advertisements are inclined to drink and drive; if drinkers have a higher recall of alcohol advertising slogans and jingles than students who do not drink; finally, if drinkers tend to pay closer attention to alcohol advertising but would say they aren't influenced by alcohol advertising.

## CHAPTER II. REVIEW OF LITERATURE

### The drinking and driving problem

Almost all American teenagers, ranging in estimates from 80-97 percent, have experimented with alcohol (Rachal, 1976). Alcohol is the most prevalent and widely used drug by teens and has consistently held this position. The widespread use of alcohol by young people has been a cause of increasing public concern due to the potential for its direct effect on the health of the youths themselves, as well as to the threat to public safety that results from the practice of driving while intoxicated (DWI) (Rachal, 1976).

The primary cause of death among children and adolescents in the United States is accidents, including those caused by the use of alcohol while driving and risk-taking (Lewis and Lewis, 1984).

National figures estimate that ten percent of adults 18 and over are frequent, heavy drinkers (Promoting Health, 1980), over 14 percent of American youth are "problem drinkers," reporting drunkenness at least six times during the previous year or adverse social consequences because of drinking, including trouble with teachers or the school principal, difficulties with friends, driving while intoxicated, criticism of drinking by a date, or trouble with the police (Williams and Vejenoska, 1981). Aside from the approximately 40 percent greater risk of problem drinking for youths than for adults, another- and perhaps

greater- risk factor has been identified by the Research Triangle Institute. They have determined that much adolescent drinking especially among moderate to heavy drinkers takes place in or around cars (Williams and Vejenoska, 1981). In 1982, drivers under the age of 20 were involved in 8,300 crashes where there was at least one fatality, and at least 4.2 million traffic violations were caused by young drivers aged 15-20 (Accident Facts, 1983). Although highway crashes, injuries and fatalities have been dropping steadily for the U.S. population as a whole, this drop has not been seen for the population subgroup of those 16 to 24 years of age (Accident Facts, 1983). In addition, within this group, young men account for 75% of the fatalities (Accident Facts, 1983). Persons in this group comprise only 20% of the total licensed population and 20% of the vehicles miles travelled in the U.S. by all licensed drivers, they also caused 42% of all fatal alcohol crashes (Accident Facts, 1983). Over two million alcohol-related crashes occur each year, which results in approximately 25,000 deaths (Accident Facts, 1983). The overall proportion of crashes in the U.S. in which alcohol is involved is one of the highest in the world (Accident Facts, 1983).

Clearly, the use of alcohol by drivers in the 15-to-24-year-old age group presents a risk not only to others on the road but to themselves as well (Accident Facts, 1983).

### The role of alcohol advertising

Specific concerns about television's depiction of alcohol and other drugs focuses on the potential social learning which might occur among young viewers (Greenberg et al., 1979).

Children derive information from many sources, but television in particular provides graphic and dramatic exposure to wordly behaviors which go substantially beyond the child's immediate experiences. And television presents attitudes and values which may differ from those of family and peers (Greenberg et al., 1979, p. 112).

Current national audience data from Neilson ratings indicates that all age groups have expanded their viewing time since the early 1970s (Greenberg et al., 1979). Thus, the potential for learning from television exists in terms of time spent with the medium, young viewers use of TV for social information (Greenberg et al., 1979). This is based on the premise that alcohol at least is available on a widespread basis during television's prime hours, inside the programs, exclusive of commercials (Greenberg et al., 1979).

The U.S. mass media carry a massive amount of advertising for alcoholic beverages. In the late 1970s network television aired more than 5,000 beer commercials per year (Greenberg et al., 1979). Such popular magazines as Newsweek, People, Cosmopolitan, and Playboy each presented more than 100 advertisements per year. Advertising of wines increased dramatically in all media during the decade, and in 1980, yearly spendings of alcohol advertisers

reached almost one billion dollars (Greenberg et al., 1979). Besides this, there is extensive drinking portrayed in entertainment programming (Greenberg et al., 1979).

In order to promote their individual brands, advertisers create messages with a number of common themes and appeals that may affect the basic attitudes and behaviors, especially among younger audiences (Garlington, 1977). Content analysis studies show that characters in ads are typically depicted as youthful, physically attractive, upper-middle class, successful, sophisticated, elegant, happy, and adventurous (Garlington, 1977). Drinking in these ads is portrayed as rewarding and acceptable in a wide range of situations. On the other hand, the ads neglect to present any warnings or information about the health implications of excessive or hazardous drinking practices (Garlington, 1977).

Atkin and Block (1984) conducted a study to determine the contents and effects of alcohol advertising on individuals. A series of seven studies were examined, and several important findings were discovered. They found that there was a substantial quantity of television beer commercials and magazine liquor ads readily accessible to mass media audiences, including youthful segments who frequently watched and read those vehicles carrying the most advertising. The researchers indicated that surveys show that individuals

notice large numbers of ads, and pay close attention to between one-fourth and three-fifths of the messages encountered. It was stated that ads on television attract greater attention than magazine ads, possibly because of the more intrusive nature and higher complexity of the messages. They indicated that exposure and attention is higher for adolescents than older adults. Thus, there is ample opportunity for alcohol advertising to influence the cognitions, values, and behavior of the public, especially teenagers. The findings also suggested that advertising exerts a major influence on audience cognitions about various brands of alcohol. It was mentioned that the distinctive themes and symbols appear to be readily learned by substantial segments of the sample; the people with the highest reported exposure to ads have the broadest brand awareness. Thus, advertising seemed to serve as a significant informal source of socialization about the subject of alcohol (Atkin and Block, 1984).

Atkin and Block believe that heavier drinkers are motivated to attend to advertising, and that the drinkers seek the alcohol ads rather than the ads than producing drinkers. The researchers felt that there were several considerations that lead to the conclusion that alcohol advertising is an active force in heavy drinking among teenagers. Most adolescents see advertising before they begin drinking and before they become regular

drinkers. Second, exposure to advertising is not a highly motivated form of information-seeking behavior; people are exposed to whatever ads they happen to encounter while watching TV or reading through magazines. Third, the predispositions of those adolescents who have not yet started drinking seems to be influenced by advertising. Since persons in this segment of the sample were non-drinkers, the correlation between advertising exposure and intention to drink couldn't be readily explained by causality (Atkin and Block, 1984).

Within the same study, the researchers suggested that alcohol advertising affects drinking and driving. It was mentioned that people who reported the most exposure to alcohol advertising are more likely to drive after drinking and drink while riding or sitting in a car. It is likely that advertising exerts some influence and this impact probably occurs in a primarily indirect fashion, as advertising produces higher consumption, which results in more frequent drinking in the driving context (Atkin and Block, 1984). The researchers indicated that there were several implications that can be drawn from these findings. Regarding driving, it does not appear that advertising directly encourages drinking/driving via manifest content appeals. For other types of hazardous behavior, the message content does depict alcohol in these risky contexts, but the impact is negligible since most people are aware of the



dangers (Atkin and Block, 1984). Thus, changes in advertisement portrayals of hazardous activities does have some subtle and indirect effects on drinking/driving (Atkin and Block, 1984).

Atkin and Block (1984) implied that although few ads were judged to contain dubious claims, celebrities, disparagement, underage characters, or explicit psychosexual themes, these appeals may still produce occasional cases of socially significant influence. They found compared to adults, adolescents seem to be especially vulnerable to ads that use celebrity endorsers, sexy models, and youthful looking characters, but they are less likely to believe dubious claims. Also, endorsements by athletes or entertainers seem to make a major impact on young people in the audience, who are impressed with these celebrities. They suggested that restrictions on the use of famous endorsers may serve to reduce the the effects of advertising on adolscents (Atkin and Block, 1984).

Among the themes considered, the researchers found that sexually-oriented advertising was most prevalent. Ads that feature seductive models or suggestive language are offensive to a small but significant proportion of the audience, and are interpreted in a sexual manner by a majority. The researchers believe that while many adults react negatively, this type of ad is highly effective with adolscents. To minimize the influence on young people, Atkin and Block (1984) recommend that it may be

advisable to use more subtle visual depictions and verbal allusions to sex.

Finally, they concluded that advertising apparently seems to convey the image that the typical drinker is young. They felt that this occurs even though very few ads used models who are clearly 21 or under; the fact that so many characters are in their early or mid-20s seems sufficient to produce the effect.

Atkin et al. (1984) conducted a study to determine the relationship between exposure to alcohol advertising and drinking patterns of adolescents who were below the legal drinking age. In order to test the predicted positive association between the amount of naturalistic exposure to alcohol advertisements and amounts of reported alcohol consumption by teenagers, a correlational survey was designed. The questionnaire asked teenagers about their drinking behavior, their exposure to alcohol advertising, relevant demographic information, and other possible communication influence. The subjects used for this study were 665 teenagers from seventh through twelfth grades in Michigan, California, New York, and Georgia. The sample was demographically typical in terms of sex (49 percent males, 51 percent females), race (84 percent white, 12 percent black, and 4 percent Oriental or Chicano), community size (18 percent large urban city, 30 percent medium urban city, 31 percent suburban or college town, and 21 percent small town or rural area),

occupational status of parents (35 percent upper-middle-class, 39 percent lower-middle-class), and church attendance (30 percent regular, 23 percent occasional, 25 percent seldom, and 22 percent never).

For the purpose of this study, half of the sample received a questionnaire focusing on liquor advertising and consumption, while the other half was asked about beer and wine. For liquor, respondents were first asked about their habits of reading major magazines; this measure was then weighted by the average number of liquor ads carried per month in each periodical. The respondents were then asked to report the number of liquor ads they typically noticed when they read magazines and what proportions (ranging from "none" to "most") of the ads they attended to for at least five seconds. Within the same study, respondents were also asked the number of ads they remembered for each of six categories of liquor (e.g., gin, scotch) (Atkin et al., 1984).

For both beer and wine advertising, the questionnaire featured parallel items asking about beer and wine advertising exposure. Each respondent's access to ads was measured by the amount of television he viewed during prime time and sports programming (when most alcohol commercials are shown). Also, by how many magazines he read presenting beer and wine on television and in magazines was tapped. Photos of specimen ads were used as for the

respondents in the liquor group, and measures derived from those items were similarly combined into an overall beer and wine exposure index.

In this same study, it was found that advertising has an influence on drinking behavior during adolescent years (Atkin et al., 1984).

It was found that the relationship between exposure to ads and liquor drinking was strongly positive, and that there is a moderate association for beer, while the linkage to wine drinking is weak. Atkin et al. believed that the association between exposure to advertising and drinking behavior might be explained by common antecedents. However, it is possible that certain unmeasured personality characteristics or attitudinal orientations might predict both exposure and drinking (Atkin et al., 1984). It was mentioned for example, dissatisfaction with life may motivate viewing of those TV shows carrying heavy beer advertising and also produce reliance on alcohol, or sexual liberalism may motivate reading of erotic magazines featuring liquor ads and also lead to consumption of alcohol.

In addition, Atkin et al. (1984) stated that coincidental exposure to entertainment or informational content in magazines or on television may contribute to drinking behavior. They also found that the direction of causality is in doubt, due to the lack of time ordering in the static design. They believed that advertising is not necessarily the causal agent in the relationship, but heavier drinkers may be motivated to attend to

alcohol advertising, so that the positive relationship may be due to drinkers seeking ads rather than ads stimulating alcohol consumption.

A study conducted by Atkin et al. (1983) related to the impact of advertising on excessive or heavy drinking beyond normal levels and whether advertising is responsible for alcohol consumption in the context of automobile driving and other activities which may be hazardous when combined with drinking. For the purpose of this study, the influence of alcohol advertising was examined via two survey methods, a correlational field survey and a message response study. The correlational survey measured both exposure to advertising and various items involving excessive and problem drinking, and assessed the relationship between these variables. In the response study, individuals were shown specimen advertisements and asked about their reactions to the message content (Atkin et al., 1983).

For Atkin et al. (1983) investigation, a sample of 1,227 respondents was surveyed. Subjects were between the ages of twelve and twenty-two years old due to the widespread concerns with advertising impact on young people. For the purpose of this study, judgmental sampling was used to obtain persons with diverse characteristics and backgrounds representative of the broader population along key demographic attributes. Junior and senior high schools provided the major source of adolescents,

supplemented by shopping mall intercepts. For those in the immediate post-high school age group, about half were chosen from college or trade school classes. Geographical dispersion was attained by supplementing the midwest sample sites with respondents from the west, south, and east (52% Michigan, 17% California, 17% New York, and 14% Georgia) (Atkin et al., 1983).

Atkin et al. (1983) survey instrument measured a wide range of variables including brand awareness, alcohol knowledge, images of drinkers, brand preferences, attitudes toward drinking, and alcohol consumption patterns. The survey focused on two sets of measures: excessive drinking and hazardous drinking. The survey also included many variables that were used for control purposes such as family and peer drinking patterns and interpersonal encouragement to drink, exposure to TV entertainment depictions of drinking, participation in a school unit on alcohol, exposure to public service messages about drinking, and the demographic factors of age, sex, social status, community size, and religious activity. The amount of drinking was measured in terms of consuming different brands of alcohol and the total amount of beer, wine, mixed drinks, and straight drinks consumed per week by the individual.

Atkin et al. (1983) found that those above the median report consuming 4.5 drinks during an evening at a bar or party, compared to 2.9 for those with lower exposure. In the high

exposure group, 33 percent say they have at least five or six drinks at least once per week, which is double the proportion for the less exposed respondents.

These differences are significant, indicating a substantial raw association between watching or reading ads and heavy consumption of alcohol (Atkin et al., 1983).

After analyzing the data, Atkin et al. (1983) found that monthly drinking and driving was reported by one third of high school upperclassmen and about half of college-age persons. The researchers go on to say that the average person feels he can drive safely after two-to-three drinks, and a majority of all the age groups believed that driving, boating, skiing, climbing, rafting, and swimming are dangerous activities especially after a few drinks. Golfing was the only activity that was an exception.

The results of this study indicate that among those above the median in exposure, 39 percent have driven after drinking in the past month, compared to 25 percent of those below the median. It was noted that almost half of the highly exposed persons say they had consumed alcohol while riding in the car in the past month. Driving while drunk was reported by 39 percent of the high exposed and 28 percent of the less exposed respondents (Atkin et al., 1983). The researchers noted that the high exposure group felt they could drive safely after consuming 3.2 drinks, which was a half-drink greater than the low exposure groups.

In this study, the researchers indicated that alcohol advertising exposure is positively related to heavy drinking, problem drinking, and hazardous drinking. It was mentioned that the relationships are moderate in strength for the heavy drinking and drinking/driving indices.

Much of the influence of advertising works through everyday drinking behavior, such that ads stimulates consumption, and greater consumption leads to heavy or problem drinking and to drinking in hazardous situations (Atkin et al., 1983 p.1012).

Atkin et al. (1983) concluded that their evidence appeared to indicate that mass media advertising for alcohol plays a significant role in shaping young adults' attitudes and behaviors regarding excessive or hazardous drinking.

McCarty and Ewing (1983) conducted a study that examined three hypotheses related to viewing alcoholic beverage advertising: (1) alcohol advertising cues drinking, (2) alcohol advertising prompts faster drinking, and (3) drinkers are more influenced by alcohol advertising when they are drinking. This study tested implications derived from a study by Leventhal (1964) concerning the potential effects of alcoholic beverage advertisements and the attempts to determine if exposure to advertising for distilled spirits influenced (1) the quantity of liquor poured in mixed drinks, (2) the rate of drinking, or (3) the level of intoxication.



For the purpose of selecting subjects for this research, newspaper advertisements and posters were used to recruit men and women aged 18 to 26 years to participate in the study. The applicants were permitted to participate only if they drank more often than once a month and only if they did not classify themselves as a problem drinker or recovering from alcoholism. It was found that ninety-two percent of the subjects reported drinking at least once a week. Forty percent of the subjects were heavy drinkers, 36% were moderate drinkers, and 24% were light drinkers. A total of 48 men and 64 women completed the study.

Study participants viewed two sets of 10 photographic slides of advertisements. The advertisements, taken from popular magazines, were selected for their photographic quality and the presence of a content relevant to the nonalcoholic products. The products advertised were a bourbon, brandy alexander, a scotch, two blended whiskeys, a gin, a liqueur, a vodka, bananas, and a perfume. The second set of slides contained advertisements for overcoats, sour cream, pineapple, a men's cologne, two women's perfumes, furniture, an automobile, hair color, and lipstick (McCarty and Ewing, 1983, p.1013).

The subjects for this study also participated by mixing drinks in a private bar. After mixing the drinks and leaving, an observer replaced the used bottle of alcohol with an identical bottle containing 500 ml of alcohol. The observer then measured the volume remaining in the used bottles to determine how much liquor each participant had poured. When the participants returned for their second drink, the bottles used for the first

drink were again present (McCarty and Ewing, 1983).

After participants mixed their drinks, the slide presentation began. Subjects rated each slide on three dimensions: (1) good-bad, (2) the presence of an overt sexual theme, and (3) the presence of subliminal sexual messages. After the 10 slides were viewed for 30 seconds each, the slides were shown again in the same order for 150 seconds each. Slides were discussed and a consensus reached. Groups that saw the alcohol advertising first, viewed nonalcohol advertising during the second slide session and vice versa. Midway in each session (15 minutes before the end) the experimenter removed unfinished drinks, and the amount of liquids remaining was measured. At the completion of the second slide discussion, group members evaluated the study session (McCarty and Ewing, 1983, p. 1014).

McCarty and Ewing (1983) indicated that the assumption that drinkers are less likely to limit the amount of liquor in their mixed drinks was tested with a sex X predrink X advertising analysis of variance on the milliter of liquor poured in drinks after exposure to the first set of slides. It was found that advertisements for alcoholic beverages did not influence the amount of liquor poured in drinks,  $F(1,104)=0.28$ . It was also indicated that individuals with an alcoholic predrink and individuals with a soft drink predrink mixed drinks with equivalent quantities of liquor,  $F(1,104)=0.28$ . Drinkers' sex strongly influenced the quantity of liquor used: males drank more,  $F(1,104)=9.09$ ,  $p=.01$  (McCarty and Ewing, 1983). The analysis demonstrated that men drank much more than women (they left less liquid). McCarty and Ewing (1983) stated that subjects

whose first slide set consisted of advertising for non-alcoholic products tended to drink more over both slide sets than those whose first slide set contained alcoholic beverage advertising,  $F(1,104)=3.63$ ,  $p=.06$ . It was noted that advertising had a non-significant main effect, and the rate of drinking was not differentially affected by the advertising. Based on Leventhal's assumption the third test examined how advertising encourages continued drinking and increased intoxication. This test was measured by a sex X predrink X advertisement analysis of variance on breath alcohol concentration found that men had higher breath alcohol levels than women. Again, advertisements did not have a main effect, but an interaction between predrink and advertisement was found,  $F(1,104)=4.61$ ,  $p=.04$ .

McCarty and Ewing (1983) noted that advertisements may cue continued drinking among intoxicated drinkers because they are less attentive to the negative results of continued drinking. Leventhal cited in McCarty and Ewing (1983) that alcoholic beverage advertising is considered a powerful tool. He stated that some individuals believe that alcoholic beverage advertisers condition children and youth with cartoons, jingles, and attractive role models to view drinking as a pleasurable and necessary part of life. He further said that it is claimed that new products are introduced and advertised specifically to appeal to the youth market (McCarty and Ewing, 1983).

Breed and DeFoe (1980) conducted a study examining how the media portrayed alcohol (and drugs to a lesser extent). In 1976-77, Breed and DeFoe monitored prime-time programming and noted that one way or another, the media do influence individual attitudes and behavior. It was found that despite the similarities in the interactions between the chemical agent and the human body, society defines alcohol and the other drugs in very different ways. It was noted by Breed and DeFoe (1980) that alcohol is widely thought of as a beverage, not a drug. Alcoholic beverages are manufactured and sold by large organizations and are subject to taxation like any other business.

Most people (some 70% of all adults) drink alcohol upon occasion. Men and women and members of most ethnic and religious groups use it (Breed and DeFoe, 1980). The only major problem is its use by minors (children under 21 years of age).

The researchers noted that the mass media reflect these societal definitions. Drinking appears to be accepted as a fact of life, while drugs are often seen as dangerous and evil. It was mentioned that on television, for example, heroes and heroines drink just as villains and comic characters do. In prime-time situation comedies and dramas, alcohol makes visual or verbal appearance more than four times per hour. A considerable proportion of this activity goes beyond sipping; quite often characters are seen drunk on screen, and many jokes about heavy

drinking are heard (Breed and DeFoe, 1980).

A content analysis study conducted by Greenberg et al. (1979) analyzed the usage of alcohol, tobacco and illicit drugs during two television seasons; 1976-1977 and 1977-1978. The analysis found in both seasons, alcohol predominated, accounted for more than two-thirds of all the coded substance acts.

More than two acts of alcohol use were found per hour in each season, with the 1977-78 sample week averaging 2.66 alcohol acts per hour of fictional television programming (Greenberg et al., 1979, p. 246).

It was noted that there was an increase of nearly one more alcohol act every two hours.

There were clear and consistent differences in the analysis by time period. The three time periods used represent Saturday morning programming of cartoons and non-cartoons, especially for child audience; 8-9 p.m., formerly known as the family hour, but now a period during which the networks claim to be providing programs for a general family audience, and 9-11 p.m., the key prime time designated for more mature programming. In each of the two seasons' samples, significant differences ( $p=.001$ ) occurred across these three time periods. Alcohol use on Saturday morning programs was nil; it occurred somewhat more than one and one-half times per hour during the 8-9 p.m. time slot; from 9-11 p.m., it exceeded three instances per hour in the first season analyzed, and bordered on five instances per hour in the second season. Whatever trend appears for an increase in alcohol display in fictional television programming was entirely accounted for during the 9-11 time period, a jump of more than one and one-half instances per hour in the 1977-78 data (Greenberg et al., 1979, p. 247).

Mosler and Wallack (1979) examined a series of general

population surveys conducted by the Social Research Group, School of Public Health, University of California at Berkeley as part of an evaluation of a California State-funded alcohol problem prevention project.

The surveys consisted of interviews with randomly selected members of the population between the ages of 12 and 59. Surveys were conducted in two San Francisco Bay Area sites and in Stockton, California during the autumn 1977 and summer 1978. The researchers noted that compared with the nation as a whole, these are relatively "wet" communities: approximately 70% of adults nationwide are current drinkers, approximately 80% of the adults at these sites were current drinkers.

It was stated that the first sampling included two items relevant to alcoholic beverage advertising: "Please tell me whether you basically agree or basically disagree that: (1) alcoholic beverage advertising makes drinking seem more glamorous than it really is; and (2) there is too much advertising of alcoholic beverages" (Mosler and Wallack, 1979, p. 90).

Mosler and Wallack (1979) found that roughly three-quarters of those interviewed agreed with the first statement and slightly fewer agreed with the second. Between 54% and 59% agreed with both items. Males and females did not differ in their responses to the first item. Females, however, were more likely to agree that, "there is too much advertising of alcoholic beverages."

A third item was added to the second survey: "Alcoholic beverage advertising makes people drink more than they really should." It was found that responses to the first two items were roughly the same and one-half of the respondents in each site agreed with the new item. Mosler and Wallack (1979) noted that when combining the three items, it can be seen that approximately four out of ten respondents agreed with all three items; 71% agreed with at least two of the three items; 92% agreed with at least one item; and only 10% did not agree with any of the items.

From this limited presentation it could be surmised that a significant number of people think that alcoholic beverage advertising: (1) has undesirable effects (makes people drink more than they really should); (2) is in excess (there is too much advertising of alcoholic beverages); and (3) is inaccurate in its presentation (makes drinking seem more glamorous than it really is). Although it is only speculation to infer from these data anything about attitudes toward alcoholic beverage advertising other than what has been said here, we believe that the data suggest that the general public is concerned with the content and extent of alcoholic beverage advertising (Mosler and Wallack, 1979, p. 91).

Katzper et al. (1978) conducted a study which examined the alcohol beverage industry's view of the value and role of advertising and its relationship to consumption. The researchers found that the alcohol beverage industry assumes advertising does increase consumption, and increased consumption is related to increased alcohol related problems and alcoholism. It was stated that alcohol advertising encourages heavy drinkers to drink more.

They account for the target percentage of consumption and are more likely to have alcohol related problems (Katzper et al., 1978). He concluded by saying that caution about excessive use of alcohol was seldom mentioned. Numerous ambiguous symbols appeared. Little logical relationship exists between the product and the advertised messages. He felt that the ads contained suggestions of ideal outcome states such as success and prestige, social approval, hedonistic pleasure, exotic associations and sexual accomplishment.

Garlington (1977) examined the rates of both alcoholic and non-alcoholic beverage-related events in television commercials and programs. For the purpose of this study, Garlington (1977) used three undergraduates and one graduate student, all women as trained observers. Most of the observation took place during July and August, 1975, and a few additional observations were completed from September to November, 1975. The primary focus was on soap operas, but for comparative purposes some data were presented on game shows. Schedules were arranged to provide overlap occasionally at different periods throughout the broadcast day, in order to sample reliability between the observers at various times (Garlington, 1977). Three Spokane television stations (KREM, Channel 2, American Broadcasting Company; KXLY, Channel 4, Columbia Broadcasting System; and KHQ, Channel 6, National Broadcasting Company) were viewed from sign



on to sign off each day of the week. The schedule was completed over a number of weeks, but each hour of each day on all three stations was represented in the complete schedule. Only soap operas and game shows were reported on (Garlington, 1977). The results from this study found that soap operas averaged almost three 1-minute intervals per 21 minutes program during which an alcohol-related event occurred, while game shows averaged only one-tenth that amount. It was stated that alcohol was presented infrequently in commercials during either type of program.

Garlington noted three types of alcohol-related events: drinking scenes, in which the plot action involved drinking of alcoholic beverages; background drinking, scenes in which drinking was depicted, but was not part of the ongoing action; and verbal reference to drinking. Drinking scenes made up more than half of the drinking-related events. Background drinking and verbal references to drinking occurred with approximately the same frequency. Garlington (1977) concluded that the effect of television programs and commercial (advertisements) could be related to violence and aggression, particularly among young people.

## CHAPTER III. REASONS FOR UNDERTAKING THE STUDY

The ban of alcohol advertising

For the past decade the ban of alcohol advertising has been a major issue in the media. Evidence has been reviewed from more than a dozen investigations of alcohol advertising, including econometric research, experiments, self-reported effects studies, and correlational surveys; methodological limitations of each approach have been identified and conclusions have been drawn. According to Atkin, ads contribute to positive images of drinkers and to favorable attitudes toward drinking as an acceptable, rewarding and attractive practice.<sup>15</sup> He feels that the influence of ads on excessive, hazardous, and problem specific effects on young people, the few studies examining teenage samples indicate that the typical adolescent is exposed to nearly 1,000 beer, wine, and liquor advertisements each year. Evidence shows that alcohol ads have an important impact on liquor consumption and a modest impact on beer drinking. Even among youth who are not yet drinkers, ads seem to increase the intention to drink in the future (Atkin, 1984).

Atkin (1984) indicated that a case can be made for a total ban of alcohol advertising in all media, however, less dramatic measures may alleviate some problematic effects. He believes that one promising approach is to restrict lifestyle portrayals that serve to promote pro-drinking attitudes and greater consumption;

regulating the nature of social-psychological appeals would minimize certain undesirable consequences (e.g., youth drinking, favorable generic attitudes toward alcohol, heavy adult consumption, and alcohol abuse) without interfering with the legitimate brand shifting goals of advertisers. Based on the evidence, the priority media channels for regulation would be magazines, television, and newspapers. Also, he believed that more intensive efforts in disseminating informational and education messages about alcohol, e.g., TV and radio PSAs, print public service ads, news stories, and disclaimers in commercial ads, would effectively counteract some controversial effects of advertising.

According to Breed and DeFoe (1979), in several countries, alcohol advertising regulations have been more strict than here in the United States. France, Sweden, Norway, Finland, the Soviet Union, Bulgaria, the Netherlands, and Canada have banned several kinds of alcohol advertising due to the fact that alcohol ads tend to strengthen a normative climate that legitimizes drinking and the role of the drinker, while weakening the position of the non-drinker. They believed that this is the climate that young people enter as they face questions about their own drinking.

William Plymat, executive director of the American Council on Alcohol problems, and a Des Moines, Iowa native, believed that

beer advertising on television is a major cause of alcohol addiction and automobile accidents involving persons under 21. On September 7, 1985, he urged Congress to ban broadcast advertising of beer and wine.

Beer and even wine advertising has a powerful effect on the minds of impressionable youth in the teen years. In the long run, we will make progress only if we stop TV beer and wine advertising. I do not think we can, by simple education in schools and churches, ever overcome the impact of powerful TV commercials on the minds of youth(Des Moines Register, September 8, 1985, p. 3).

Plymat view was disputed by James Miller, chairman of the Federal Trade Commission. Miller believed that there was no evidence to prove that advertising had any impact on total consumption, much less abuse. This case was argued, but there was little hope for the ban of alcohol advertising within the state of Iowa (Des Moines Register, September 8, 1985).

According to Mosler and Wallack (1979), the "youth market" is a prime target of many recent alcoholic beverage advertisements, yet current Bureau of Alcohol, Tobacco and Firearms (ATF) regulations are silent as to the form of such advertisements may take. This is a serious omission given the risks involved and the particular susceptibility of youth to characterizations of "adult" activities. Mosler and Wallack mentioned that the new regulations should state that any advertisements aimed at youth are misleading under the Federal

Alcoholism Administration Act (FAAA) (because of the inherent risks that such appeals inevitably contain), and specific provisions, such as those found in the Wine Institute Voluntary Guidelines, should be promulgated. Some of these include: (a) prohibiting the use of any models or personalities who appear to be under the age of 25; (b) prohibiting the use of traditional heroes of the young; particularly those engaged in pastimes and occupations having appeal to young persons; (c) prohibiting the use of amateur or professional sports celebrities, past and present; (d) prohibiting any advertisements in any children's or juveniles' magazines or other publications or television shows aimed at youth; (e) prohibiting the use of music, language, gestures or characters commonly associated with juveniles; (f) prohibiting any suggestion that any alcoholic beverage is similar to another type of beverage popular with children (Mosler and Wallack, 1979). All these factors do contribute to the attitudes teenagers take about drinking, and they could have an influence on their behavior.

#### Teen driving while intoxicated in Iowa

The researcher is interested in the relationship between advertising and the drinking and driving problem among teenagers. This problem has two distinct aspects that the researcher feel are of great importance: drinking and driving while intoxicated. Students take great risks when

they drive under the influence of alcohol:

- (1) At least five teenagers are killed each year due to driving while intoxicated in Iowa.
- (2) Their impaired driving while intoxicated endangers the lives of others as well as their own.
- (3) Offenders can have their driver's licenses taken away or they may serve a jail sentence because drinking does cost the taxpayers more each year.

According to Iowa Department of Transportation, in 1983, there were more than 169,242 licensed drivers in the 16-21 age group. The number of drinking drivers in fatal accidents rose from 56 killing 61. It was also noted that approximately 36 of the 61 were teenagers.

Over a number of years Iowa high schools have used several educational programs as a means to decrease the number of youth who drink and drive. These programs include guest speakers, seminars, presentations, and workshops. The main purpose of these programs is to meet the needs and answer questions concerning the dangers of drinking and driving. Major topics for these educational programs might include sections on the physiology of alcohol use and abuse, crisis intervention techniques, counseling skills, responsible hosting, alcohol education awareness strategies, and respecting non-users. These programs have been used in many schools within the United States. Another attempt by Iowa high schools to reduce the number of drinking and driving cases involved distributing such information as

brochures, pamphlets, and other print materials concerning alcohol and the inability to drive safely while intoxicated. A number of citizen organizations have been formed and have become strong forces in drinking and driving areas at a national level as well as a local level.

#### Citizen Organizations

Students Against Driving Drunk (SADD) was begun at Wayland High School in suburban Boston, Massachusetts by a health educator who recognized that the time had come to grips with their own number one national problem, that of drinking and driving. SADD is designed as a 15-session course for high school sophomores (who are just reaching the age at which they can obtain driver's license). Students who take the required course automatically become members of SADD. The listed aims of SADD are: to save lives of teenagers and others; to make students aware of the problem of drinking and driving; to develop and encourage peer counseling among students about alcohol use; and to increase public awareness of this problem, and call for its prevention everywhere.

Remove Intoxicated Drivers (RID) was founded to raise public consciousness concerning the problem of drunk driving; to collect and disseminate information; to improve governmental systems; and to support victims of drunk driving. National and local newsletters are published quarterly. RID also distributes "How

Can I Help," which is a citizen action manual, fact sheet, bulletin, and a victim aid sheet. RID was founded by a group of people who felt that there was a strong need for the awareness of the problem of drinking and driving.

Citizens For Safe Drivers Against Drunk Drivers and Other Chronic Offenders (CSD) is a national non-profit public interest membership organization founded in 1977. Its mission is to prevent highway deaths caused by drunk drivers and other chronic offenders. The goals of CSD are achieved through public information and education campaigns, intensive research, court watch programs, and legislature actions at both the state and federal level. CSD also serves as an information clearinghouse and communication network.

Finally, Mothers Against Drunk Drivers (MADD) is a public organization. It encourages parents and children to sign a contract. In this contract, the teenagers promise to seek a safe way home from parties where alcohol is a concern, and the parents agree to provide such help or seek safe transportation for them under similar circumstances. The contract improves communication between parents and children, and indirectly helps them to make decisions in difficult situations, and it also helps them to realize that there is an alternative to drinking and driving.

According to Iowa Governor's Highway Safety Office, in 1983



as in 1982, most teenagers killed in alcohol related accidents were doing the driving themselves (52%) or were passengers of a teen drinking-driver (35%). At the same time, there was an increase in deaths of teens who might be collectively termed "innocent bystanders," such as drivers or passengers of other vehicles, or pedestrians. Teen deaths in this group increased from two in 1982 to nine in 1983. It is questionable that in order to reduce the teen death toll due to drinking and driving, the teens themselves must avoid drinking and driving or riding with drinking friends.

About one-tenth of all magazines and television ads depict alcoholic beverages in large quantities or sizes, and small proportion of characters in the ads appear to be intoxicated (Atkin et al., 1983). Messages with excessive drinking themes may imply that the product be consumed beyond moderation. Further, the cumulative impression conveyed by all ads may be that high levels of consumption are appropriate and rewarding. Thus, it is plausible that ads may encourage heavy drinking and play a role in alcohol problems (Atkin et al., 1983).

About one of every twenty alcohol ads portrays potentially hazardous activities, especially water sports. These occasional messages may directly influence audience attitudes such that the activities are seen as safer and acceptable to perform while drinking (Atkin et al., 1983). It seems likely that such

advertising will stimulate greater frequency and quantity of consumption before or during these hazardous activities (Atkin et al., 1983). Advertising appeals may instigate the entirely new activity of learning to drink, may suggest new types of alcohol for trial by drinkers, and may provide ritualized ideas about the proper contexts for consumption. These ads may also contribute to the conception that drinking is a legitimate and normal activity in society (Atkin et al., 1983).

#### CHAPTER IV. METHODOLOGY

A self-administered questionnaire and an advertising recall survey were administered to 63 Ames High juniors. Babbie (1983) mentions two advantages of self-administered questionnaire: considerable savings of money, and willingness of respondents to respond to anonymous self-administered questionnaires, especially when dealing with sensitive issues. An advertisement recall survey gives students a chance to identify ads and allows the researcher to correlate advertising recall with attitudes and behaviors on drinking and driving. Other factors which enter into consideration in this study are cost constraints and convenience for both the potential respondents and the researcher. The questionnaire and the ad recall survey were administered to an experimental group and a control group at Ames High School on January 30, 1986.

##### Survey sample

The questionnaire and ad recall survey were administered to juniors at Ames High School who were taking physical education. The reason for selecting this specific group was because they were the students who were just beginning to drive for the first time so they were confronted with the possibility of drinking and driving. The control group consisted of 32 students (14 males and 18 females) and the experimental group consisted of 31 students (16

males and 15 females). The sample size was somewhat small due to the fact that there were limitations on studies at Ames High School. It was impossible to get a larger sample size because when a study is done at Ames High, it must be related to something the students are studying in the classes.

#### Procedure

The experimental group was given a copy of the October 10, 1985 issue of Rolling Stone Magazine. They were given twenty minutes to examine the magazine and were asked to read material in the issue that appealed to them. Rolling Stone was chosen because its audience is primarily teenagers, and it contains a large percentage of alcohol advertisements. This magazine's audience is primarily both male and female teenagers, and it is one of the few magazines that is geared to teenagers that carry alcohol advertisements. After twenty minutes, the magazines were collected, and the researcher administered the ad recall survey and the questionnaire.

The control group was given the ad recall survey first. They were shown a series of 21 slides of ads from the October 10, 1985, issue of Rolling Stone Magazine. Each ad shown had been adjusted so that the name of the product in the copy, headline, or on the label of the product was whited-out (see Appendix C). The ad recall survey determined if the students could identify the specific product featured in each ad. Each ad was numbered, and respondents were then asked to fill in the name of the product or service featured in each ad.

The 21 ads selected for the ad recall survey were:

1. Goodyear tire
2. Sony
3. Nutcracker Amaretto Schnapps liqueur
4. Giorgio Brunti shoe
5. Molston Golden beer
6. Seagram's V.O. Canadian Whiskey
7. Kool cigarette
8. Benetton clothing
9. Artcarved Class Ring
10. Budweiser
11. G. H. Bass shoe
12. Panasonic
13. Brittania
14. Levi's 501
15. Michelob
16. Dewar's White Label Scotch
17. English Leather cologne
18. Jack Daniel's whiskey
19. Converse
20. Vidal Sassoon
21. Dr. McGillicuddy's Imported Metholmint Schnapps

The response sheet was attached to the questionnaire. Next, a four page questionnaire which measured students' alcohol usage and their

attitudes toward drinking and driving was administered. The procedure for administering the ad recall survey and the questionnaire for the experimental group was the same for the control group.

### Conceptual framework

A variety of learning theories can be used to explain how adolescents might be affected by repeated exposure to positive messages about alcohol. Bandura's social learning approach implied that the mere observation of mediated drinking may increase the observer's tendency to drink (Caudill and Marlett, 1975). This is especially the case when the modeled behavior is portrayed as rewarding and pleasurable as content analysis indicates is the case with alcohol ads. In one experiment, students who saw a model drinking heavily later tended to consume greater quantities of wine during a taste-testing exercise than those who saw a model drinking lightly or not drinking at all (Caudill and Marlett, 1975).

Modeling theory would suggest that constant exposure to television extolling the virtue (or dangers) of alcohol consumption might well-influence drinking habits (Bandura, 1971). Bandura (1971) presented a convincing case for strong influence on behavior of observing the behavior of others, especially when that behavior is seen to be pleasurable and strongly rewarded. He points out that an observed model might, in effect, make it acceptable to behave in a particular manner: to get drunk, use alcohol to solve problems, and hence, influence behavior in a

particular direction.

The uses and gratification theory is also suggested. Since adolescents presumably have a strong need for information about a substance with which they are experimenting, they should be motivated to attend more frequently (relative to other age groups) to alcohol ads and acquire more ideas and images from the messages in these ads (Atkin et al., 1983). In addition, those who are favorably inclined towards drinking may seek out advertising messages to reinforce those opinions (Atkin et al., 1983).

#### Data analysis

After the data were collected from the readership study and the questionnaires, they were put in the computer to be analyzed. The hypotheses were tested by frequencies, Pearson Correlations and crosstab tables. Chi-squares were computed to determine if the findings were significant.

#### Hypotheses

- H. 1. Teenagers who drink are more aware of alcohol advertising than teenagers who do not drink.
- H. 2. Teenagers with a high awareness of alcohol advertising are inclined to drink and drive.
- H. 3. Drinkers have a higher recall of alcohol advertising slogans and jingles than students who do not drink.
- H. 4. Drinkers tend to pay closer attention to alcohol advertisements, but they would say they aren't influenced alcohol advertising.

## CHAPTER V. FINDINGS AND DISCUSSION

In the following section, tables are presented that list responses by frequency. This is a very straightforward method for looking at the results, and determining which variables could be analyzed in greater depth. The last section of Chapter V briefly describes the results of the alcohol advertising recall survey, and results of crosstabulations done to determine the relationship between the respondents who drink, read alcohol ads, watch alcohol ads on TV, and drink/drive. Also, this section includes Pearson correlations between drinking and identifying alcohol slogans, and whether respondents are influenced by these slogans.

### Survey data in Table form

The survey questionnaires were coded using a microcomputer. Some recoding had to be done as well. A Zenith 200 modem was used to upload the coded data, and statistical analysis was computed using SPSSX (Statistical Program for the Social Sciences).



Table 1. Age of Respondents (by frequency)

Respondent Age	Number	Percent
15	1	1.6
16	25	39.7
17	36	57.1
No Answer	1	1.6
Total	63	100.0

Table 2. Sex of Respondents (by frequency)

Respondent Sex	Number	Percent
Male	31	49.2
Female	31	49.2
No Answer	1	1.6
Total	63	100.0

Survey respondents ranged in age from 15 to 17 years-old, with more than half of the sample 17. The number of males and females was almost equal.

Table 3. Responses to the question, "If you consume alcoholic beverages, about how often do you drink them?"  
(by frequency)

Drink	Number	Percent
Do Not Drink	12	19.0

Table 3. continued

Drink	Number	Percent
Once A Month	15	23.8
3-4 Times A Month	4	6.3
Every Other Week	8	12.7
Once A Week	21	33.3
Stopped Drinking	3	4.8
Total	63	100.0

A large percentage of the respondents reported drinking once a month or more frequently (76.1 percent). Twenty-one (33.3 percent) of the 63 respondents said they drink "once a month," while 15 respondents (23.8 percent) said they drink "once a week." It is noted that 19 percent (12 respondents) said they do not drink, while 3 respondents (4.8 percent) said they "stopped drinking." One respondent commented on the questionnaire that he had at one time been a heavy drinker, but no longer drinks because he is a member of Alcohol Anonymous (AA). He went on to say that his drinking problem was somewhat due to peer pressure, and his parents felt that it was time to come to grips with the problem. So he became a serious member of AA.

The respondents who indicated that they drink were asked four questions about their alcoholic beverage preferences. They were asked, "What alcoholic beverages do you prefer?" For each of the choices

given, they were told to circle the beverage they favored most.

Table 4. Responses to the question, "How well do you prefer beer?" (by frequency)

Beer	Number	Percent
Strongly Prefer	13	20.6
Prefer	24	38.1
Do Not Know	3	4.8
Do Not Prefer	5	7.9
Strongly Dislike	4	6.3
Does Not Apply	11	17.5
No Answer	3	4.8
Total	63	100.0

Table 5. Responses to the question, "How well do you prefer wine?" (by frequency)

Wine	Number	Percent
Strongly Prefer	29	46.0
Prefer	14	22.2
Do Not Prefer	5	7.9
Strongly Dislike	1	1.6
Does Not Apply	11	17.5
No Answer	3	4.8
Total	63	100.0

Table 6. Responses to the question, "How Well  
do you prefer liquor mixed?"  
(by frequency)

Liquor Mixed	Number	Percent
Strongly Prefer	11	17.5
Prefer	24	38.1
Do Not Know	5	7.9
Do Not Prefer	6	9.5
Strongly Dislike	3	4.8
Does Not Apply	11	17.5
No Answer	3	4.8
Total	63	100.0

Table 7. Responses to the question, "How well  
do you prefer liquor straight?"  
(by frequency)

Liquor Straight	Number	Percent
Strongly Prefer	6	9.5
Prefer	5	7.9
Do Not Know	5	7.9
Do Not Prefer	15	23.8
Strongly Dislike	17	27.0
Does Not Apply	11	17.5

Table 7. continued

Liquor Straight	Number	Percent
No Answer	4	6.3
Total	63	100.0

The researchers feels that the responses to alcoholic preference were diverse depending upon the type of alcohol beverage. As for beer, 13 (20.6 percent) of the respondents "strongly preferred" it, while 24 (38.1 percent) of the respondents said "prefer." There were very few respondents who "did not prefer" or "strongly disliked" beer. Five (7.9 percent) of the respondents "did not prefer," while 4 (6.3 percent) of the respondents "disliked" beer. Eleven of the respondents answered "does not apply," while 3 respondents did not answer the question.

The question, "How well do you prefer wine?" received more responses who "strongly preferred" or "preferred" than any of the other preference questions. Forty-six percent of the respondents said they "prefer" wine, and 22.2 percent (29 respondents) said they "prefer" wine. Five (7.9 percent) of the respondents said "do not prefer," and one (1) respondent strongly disliked wine. Again, 11 respondents did not drink, and 3 respondents did not answer the question.

As far as liquor mixed was concerned, 11 (17.5 percent) of the respondents "strongly prefer" it, while 38.1 percent (24 respondents) said they "prefer." Six (9.5 percent) of the respondents "did not prefer," and 3 respondents said they "strongly dislike" mixed drinks.

There were fewer respondents who either "strongly preferred" or "preferred" straight liquor. Six respondents said they "strongly prefer" and 5 (7.9 percent) of the respondents said they "prefer." Fifteen (23.8 percent) of the respondents answered "do not prefer," and 17 respondents said they "strongly disliked" straight liquor. It appears that the respondents who did not answer the questions or said it did not apply were consistent throughout the four preference questions. Nineteen percent (12 respondents) did not drink and 3 respondents said that they "stopped drinking." Respondents preferred wine over any other alcohol beverage. One might suspect that teenagers would prefer beer over any other alcoholic beverages, but the results from these questions indicate that wine is better liked.

Since the drinking and driving problem is an important issue, the respondents were asked, "Do you have a valid driver's license?" If they responded by saying "no", then they were asked if they had a learner's permit because if they aren't driving, chances are they would not have a drinking and driving problem.

Table 8. Responses to the question, "Do you have a valid driver's license?"  
(by frequency)

Driver's License	Number	Percent
Yes	56	88.9
No	6	9.5

Table 8. continued

Driver's License	Number	Percent
No Answer	1	1.6
Total	63	100.0

Table 9. Responses to the question, "Do you have a valid learner's permit?"  
(by frequency)

Learner's Permit	Number	Percent
Yes	5	7.9
No	3	4.8
Does Not Apply	55	87.3
Total	63	100.0

Most of the respondents were licensed drivers. Eighty-nine percent (56 respondents) said "yes" they do have driver's licenses. Six (9.5 percent) of the respondents said "no". Five of the respondents answered "yes" for learner's permit, and only two respondents answered "no". It appears that 5 out of the 6 respondents who answered "no" to the driver's license question have a learner's permit.

Table 10. Responses to the question, "Do you yourself ever drive a car after you've been drinking?"  
(by frequency)

Drive After Drinking	Number	Percent
Occasionally	22	34.9
Seldom	21	33.3

Table 10. continued

Drive After Drinking	Number	Percent
Never	9	14.3
Does Not Apply	8	12.7
No Answer	3	4.8
Total	63	100.0

It was hypothesized that a large percentage of teenagers drink and drive. Based on the results of this question, 22 (34.9 percent) of the respondents said they drink and drive "occasionally," while 21 (33 percent) of the respondents answered "seldom." Only 14.3 percent (9 respondents) answered "never." The respondents who did not answer the question were probably members of the non-driving group. Also, one (1) of the respondents who did not answer could have been the one who indicated that he did not have a valid driver's license or a learner's permit as shown in Table 8 and Table 9. Taken as a whole, 68 percent of the respondents have driven after drinking.

Table 11. Responses to the question, "How often in the last 12 months would you say you have driven within an hour after you had been drinking any kind of alcohol (even one drink)?" (by frequency)

Driven with an hour	Number	Percent
Never	8	12.7



Table 11. continued

Driven with an hour	Number	Percent
1-2 Times	14	22.2
3-4 Times	5	7.9
5-6 Times	9	14.3
Once A Month	5	7.9
Twice A Month	8	12.7
Once A Week	1	1.6
2-3 Times A Week	1	1.6
No Answer	4	6.3
Does Not Apply	8	12.7
Total	63	100.0

The results of this question were very much the opposite of what the researcher expected. Based on previous studies, teenagers often drink in places where cars are used. These areas include parks, parked cars, school grounds, and also on the highways. One respondent indicated that two to three times a week he has driven an hour after drinking. Over half of the respondents (52.3 percent) said they have driven within an hour after drinking once a month or less. Eight respondents (12.7 percent) said they have never driven after drinking, while eight respondents (12.7 percent) said they drive after drinking twice a month. Four respondents neglected to answer the question.

Table 12. Responses to the question, "Do you generally read alcohol advertisements in magazines and newspapers?" (by frequency)

Read Alcohol Ads	Number	Percent
Yes	33	52.4
No	23	36.5
No Answer	7	11.1
Total	63	100.0

Over half of the respondents said they do read alcohol advertisements in newspapers and magazines (52.4 percent). Twenty-three of the respondents (36.5 percent) said no. Seven respondents did not answer the question. The researcher suspected that the seven that did not answer the question were members of the non-drinking group or respondents overlooked this question. According to previous research, most alcohol advertisements in print are designed to attract the attention of youth. Atkin (1980) indicated that in magazines, most characters in the ads are high in physical attractiveness. He believes that even the themes and logos used in alcohol advertising attract the attention of youth. Among the types of persuasive appeal used in the messages of alcohol ads are the emotional appeal (40 percent), uniqueness appeal (22 percent), and about one-tenth of the ads employ informational aspects, bandwagon appeal, and comparative appeals (Atkin et al., 1984).

Table 13. Responses to the question, "Do you generally pay close attention to alcohol advertisements on TV?" (by frequency)

Pay Attention to Ads	Number	Percent
Yes	29	46.0
No	34	54.0
Total	63	100.0

The results of this question as shown in the above table indicate that only 29 (46 percent) of the respondents said they pay close attention to alcohol advertisements, while 34 (54.0 percent) said they did not pay close attention to the ads on TV. It appears that more students read alcohol ads than watch them on television as shown in Table 12. It was expected that students would watch alcohol advertisements on TV more frequently than read the ads in print. It was suspected that more teenagers watch television than read newspapers and magazines. Greenberg et al. (1979) believed that children derive information from many sources, but television in particular provides graphic and dramatic exposure to worldly behaviors which go substantially beyond the child's immediate experiences. He also believed that television presents attitudes and values which may differ from those of family and peers. Another reason teenagers are attracted to alcohol advertisements on TV is because slogans are used and jingles are sung in almost half of all TV commercials. These slogans and jingles tend to catch the attention of the younger

generation (Atkin et al., 1984).

Table 14. Responses to the question, "Do you feel that teenagers would be less inclined to drink if alcohol advertisements were banned?" (by frequency)

Teens less inclined to drink	Number	Percent
Yes	19	30.2
No	43	68.3
Total	63	100.0

Forty-three respondents (68.3 percent) said teens wouldn't be less inclined to drink if alcohol advertisements were banned, while 19 (30.2 percent) of the respondents said they would. Based on this question, over half of the respondents felt that alcohol advertisements don't cause teenagers to drink. Many countries have banned alcohol advertisements because they felt that they are the cause of teenage drinking. As shown in Table 12 and Table 13, respondents tend to read and watch alcohol advertisements, but based on this question as shown in Table 14 teenagers said they thought they would drink regardless of whether alcohol advertisements were banned or not.

Table 15. Responses to the question, "Do you feel that ads on TV that warn teenagers about the dangers of drinking and driving have an effect on teenagers?"  
(by frequency)

TV warns teenagers of dangers	Number	Percent
Yes	36	57.1
No	26	41.3
No Answer	1	1.6
Total	63	100.0

Over half, 36 (57.1 percent) of the respondents said "yes" ads on TV which warn teenagers about the dangers of drinking and driving would have an effect, while 26 (41.3 percent) of the respondents said "no" they didn't think teenagers would be affected. All the while, over half of the respondents of this question felt that the ads which warn teenagers about the dangers of drinking and driving might have an effect on teenagers. It appears that the respondents felt that the banning of alcohol advertisements might not stop them from drinking, but the ads might encourage them to stop drinking and driving.

Table 16. Responses to the question, "How influential would you say alcohol advertisements are on American society encouraging alcoholism?" (by frequency)

Influence of ads on society	Number	Percent
Very Influential	10	15.9
Influential	24	38.1
Neutral	21	33.3
Not Influential	6	9.5
Not At All Influential	1	1.6
No Answer	1	1.6
Total	63	100.0

Thirty-four (54 percent) of the respondents felt that alcohol advertisements are influential on American society encouraging alcoholism. Twenty-one (33.3 percent) answered neutral to the question, while only seven (11.1 percent) of the respondents felt that there was no influence. A respondent wrote on his questionnaire that alcohol advertisements don't influence alcoholism. He commented further that the drinking problem among teenagers is serious, and it can't be entirely blamed on alcohol advertisements. He said that people are born with a tendency toward alcoholism, and the only way to avoid alcoholism is to stay out of touch with alcoholic beverages and people who may influence alcoholism. According to Atkin et al. (1984), alcohol advertisements do influence people

to drink based on the lifestyles portrayed in most alcohol advertisements. The following lifestyles are present in most alcohol ads: social camaraderie masculinity/femininity, escape, excessive consumption, relaxation, elegance, romance, adventure, social acceptance, sexuality, social esteem, and success (Atkin et al., 1984).

Table 17. Responses to the question, "How influential would you say alcohol advertisements are as far as encouraging you to drink and drive?" (by frequency)

Influence Ads On You	Number	Percent
Very Influential	4	6.3
Influential	6	9.5
Neutral	23	36.5
Not Influential	23	36.5
Not At All Influential	7	11.1
Total	63	100.0

Ten (15.8 percent) of the respondents felt that alcohol advertisements have some influence on encouraging them to drink and drive, while 47.6 percent (30 respondents) believed that they aren't influenced at all by alcohol advertisements. In this respect, twenty-three respondents (36.5 percent) answered "neutral" which means that alcohol advertisements could or could not have influenced them to drink and drive. As shown in Table 16, over half of the respondents felt that alcohol advertisements encouraged

alcoholism. It was mentioned by Atkin et al. (1983) that some alcohol advertisements stimulate consumption levels of teens, which in turn leads to heavy drinking and driving in dangerous situations.

Table 18. Responses to the question, "Do you think alcohol advertising is one of the many contributing factors of teenage drinking?" (by frequency)

Ads Contribute To Teen Drinking	Number	Percent
Yes	27	42.9
No	35	55.6
No Answer	1	1.6
Total	63	100.0

Twenty-seven (42.9 percent) of the respondents felt that alcohol ads do contribute to teenage drinking, while 35 (55.6 percent) of the respondents said "no" they do not contribute. There wasn't too much difference in the responses to this question and the question on the influence of alcohol advertisements encouraging alcoholism as shown in Table 16. It could be that the respondents felt that alcohol advertisements do encourage alcoholism but not as much on teenagers as other groups. Atkin et al. (1983) said that alcohol ads do contribute to positive images of drinkers and to favorable attitudes toward drinking as an acceptable, rewarding and attractive practice, especially among the teenage population.

On the questionnaire the respondents were given seven alcohol



advertisement slogans and jingles. They were given six choices and were asked to identify the correct alcohol for each slogan or jingle. These slogans and jingles have been used on television and in print ads. If the respondents weren't sure of the alcohol, they were asked to take a guess at the correct one.

Table 19. Responses to the slogan, "Put a little weekend in your week."  
(by frequency)

Beer	Numbers	Percent
Heineken	31	49.2
Budweiser Light	2	3.2
Michelob*	13	20.6
Old Milwaukee	7	11.1
Lowenbrau	8	12.7
Old English 800	1	1.6
No Answer	1	1.6
Total	63	100.0

Correct answer \*

Table 20. Responses to the slogan, "For all  
you do, this \_\_\_\_\_ for you."  
(by frequency)

Beer	Number	Percent
Bud *	63	100.0
Total	63	100.0
Correct answer *		

Table 21. Responses to the slogan, "Weekends  
are made for \_\_\_\_\_."  
(by frequency)

Beer	Number	Percent
Heineken	1	1.6
Michelob *	28	44.4
Lowenbrau	31	49.2
Bud	3	4.8
Total	63	100.0
Correct answer *		

Table 22. Responses to the slogan, "Bring out  
the best \_\_\_\_\_."

Beer	Number	Percent
Budweiser Light *	26	41.3
Michelob	6	9.5
Coors	13	20.6

Table 22. continued

Beer	Number	Percent
Miller	3	4.8
Milwaukee Best	14	22.2
Mickey	1	1.6
Total	63	100.0
Correct answer *		

Table 23. Responses to the question, "We sell no wine before its time?" (by frequency)

Wine	Number	Percent
Carlo Rose	2	3.2
Andre	1	1.6
Paul Masson *	34	54.0
Cold Duck	1	1.6
Ernest & Julio Gallo	23	36.5
No Answer	2	3.2
Total	63	100.0
Correct answer *		

Table 24. Responses to the slogan, "If you've got the time, we've got the beer." (by frequency)

Beer	Number	Percent
Lowenbrau	2	3.2

Table 24. continued

Beer	Number	Percent
Busch	5	7.9
Bud	2	3.2
Miller *	52	82.5
No Answer	2	3.2
Total	63	100.0
Correct answer *		

Table 25. Responses to the slogan, "It's downright upright." (by frequency)

Wine	Number	Percent
Carlo Rose	6	9.5
Andre	12	19.0
Paul Masson	9	14.3
Ernest & Julio Gallo	10	15.9
Harvey's Bristol Cream *	13	20.6
Boone's Farm	7	11.1
No Answer	6	9.5
Total	63	100.0
Correct answer *		

Atkin et al. (1984) felt that many slogans and jingles are used in alcohol advertising to attract teenagers. He found that the slogans are

used (80 percent, TV; 34 percent, magazines), and jingles are sung in almost half of all alcohol commercials. These commercials are believed to cause teenagers to try different brands of alcohol. The questionnaire included seven slogans and jingles from TV commercials. The purpose of using the slogans and jingles was to see if respondents could identify them by selecting the correct beer or wine listed. Table 19 shows that more than three-quarters the respondents (77.8 percent) answered the slogan incorrectly. Thirteen respondents (20.6 percent) said the correct answer was Michelob. This slogan could have been a problem for many of the respondents because of the age group. The slogan is somewhat out of date and has not been used often in the past decade.

Table 20 shows that 100 percent (63 respondents) chose the correct answer for the slogan. This slogan is ranked as one of the most commonly known slogans used in alcohol advertising on television. This slogan was the only slogan where 100 percent of the respondents answered correctly.

As shown in Table 21, the correct beer was Michelob. Only 28 respondents answered it correctly, while 33 respondents answered it incorrectly. Table 22 shows that 26 respondents identified the wine slogan correctly (Paul Masson), while over half of the respondents answered it incorrectly (37 respondents). Again, this slogan is out of date, and many of the respondents are at the age where they aren't old enough to remember when this slogan was used often on television.

Since wine was most "strongly preferred" alcoholic beverage by the respondents (Table 5), it was suspected that many of them would know

the correct answer to the slogans concerning wine. Table 23 shows that over half of the respondents answered the slogan correctly (54 percent). Twenty-three respondents felt that the correct answer was Ernest and Julio Gallo.

Table 24 shows that 82.5 percent of the respondents answered the slogan correctly, while 14.3 percent of the respondents answered incorrectly. This slogan received the second highest percentage as far as the respondent answering it correctly. Again, this slogan is common among this age group because it is still used quite often in TV commercials, especially during sport events.

The slogan, "It's downright upright," as shown in Table 25 isn't quite common among today's teenagers because it too is outdated. Again, over half of the respondents answered it incorrectly (34 respondents), while only 13 respondents answered it correctly (20.6 percent). The responses for this slogan were somewhat varied. Twelve respondents (19 percent) said the correct answer was Andre, while 10 respondents (15.9 percent) said Ernest and Julio Gallo. Seven respondents (11.1 percent) said Boone's Farm, while nine respondents (14.3 percent) said Paul Masson. Six respondents did not answer the question. Based on the results, many of the respondents apparently guessed because they weren't sure of the correct answer.

#### Crosstabular results for different variables

The researcher hypothesized that students who drink would be more aware of alcohol advertising than students who do not drink.

Based on the advertising recall study, the researcher crosstabulated group and ads from Rolling Stone Magazine.

Twenty-one ads were selected for the advertising recall study, but only eight ads had content that related to alcohol. The other ads were used to keep the respondents from finding out the exact purpose of the study.

Table 26. Results from the ad recall survey

	1-4	5-8	Males	Females	Drink	DND
Experiment	10	20	18	13	22	8
Control	28	4	14	18	28	4

The students were divided into two groups: respondents who were able to identify 1 to 4 alcohol ads and respondents who were able to identify 5 to 8 ads. The experimental group received a copy of Rolling Stone Magazine and was given 20 minutes to review it. They were then shown slides of the various ads and asked to identify them in the questionnaire. The control group was shown only the various slides and then the researcher administered the questionnaire.

It was found that the experimental group was able to identify more alcohol ads than the control group. For the experimental group, 62.5 percent of the 31 respondents were able to identify 5 to 8 ads, while 10 respondents (32.2 percent) were able to identify 1 to 4 ads. Out of the control group, only 4 respondents (12.5 percent) were able to identify 5 to 8 ads, while 87.5 percent were able to identify 1 to 4 ads.

The experimental group consisted of 25.8 percent (eight respondents) who did not drink, while the control group consisted of only five respondents who said they didn't drink.

Although 12 respondents said they didn't drink, they were still able to identify 1 to 4 ads. Some of these respondents could have been among the group who said they have stopped drinking, therefore, at one time or another they were familiar with the different alcohol advertisements shown during the study. This would determine how they were able to identify the ads.

It was also found that there was no difference between the number of males who were able to identify the ads and the number of females who were able to identify the ads. Both groups consisted of about the same number of females and males. There were 13 females and 18 males in the experimental group, and the control group consisted of 18 females and 14 males.

An attempt was made to find a relationship between drinking and reading alcohol advertisements in such media as newspapers, magazines, and billboards through the use of crosstabs. The respondents were divided into two groups. The first group included those who "never" drink, those who have "stopped drinking", and those who were "infrequent" drinkers. The second group was those who were "frequent" drinkers. As far as reading alcohol ads was concerned, the respondents answered "yes" or "no." One of the most important findings is that there is definitely a relationship between drinking and reading alcohol advertisements. This doesn't necessarily



mean that the respondents drink because they read alcohol advertisements, but what it could possibly mean is that some of the respondents are influenced by the ads.

Table 27. Crosstab Table for drinking and reading alcohol ads

	Yes, Read Ads in Print	No, Do Not Read Ads in Print
DND, Quit, Infreq	15	16
Frequent	18	7
Total	<u>33</u>	<u>23</u>

"Frequent" drinking and reading alcohol advertisements in newspapers, magazines, billboards, etc., was found to be significantly related. Fifteen respondents (26.7 percent) who were "infrequent" drinkers, who had "stopped drinking" or who "never" drank said "yes" they read alcohol advertisements, while 16 respondents (28.5 percent) said "no" they do not read alcohol ads. Eighteen respondents (32.1 percent) who were "frequent" drinkers said "yes" they read alcohol ads, while only seven respondents (12.5 percent) said "no" they did not read alcohol ads in newspapers, magazines, and on billboards. The hypothesis was accepted at the .05 level (chi-square= 3.18, df=1, one-tail test need 2.71, p=.05).

Table 28. Crosstab Table for Drinking and watching ads on TV

Yes, Watch Ads on TV		No, Do Not Watch Ads on TV	
DND, Quit, Infreq	13		25
Frequent	16		9
Total	29		34

Another relationship was found between drinking and watching alcohol advertisements on TV. Sixteen respondents (25.3 percent) who were "frequent" drinkers said "yes" they watch ads on television, while nine respondents (14.2 percent) of the "frequent" drinkers said "no". Thirteen respondents (20.6 percent) of the "infrequent" drinkers or non-drinkers said "yes" they watched alcohol commercials, while 25 respondents (39.6 percent) said "no" they did not watch TV ads. The hypothesis was accepted at .05 level ( $\chi^2=5.38$ ,  $df=1$ , one-tail test needs 2.71,  $p=.05$ ).

It appears that more of the "frequent" drinkers watch alcohol advertisements on TV than the "infrequent" or non-drinker, but it doesn't necessarily mean that they are influenced by these ads. One thing it could mean is that they are attracted to the jingles or slogans that are used for these ads or to the attractive models who are often used in alcohol advertisements.

The researcher hypothesized that students who are aware of alcohol advertisements are more inclined to drink and drive. An

attempt was made to find a relationship between drinking and driving and reading alcohol advertisements and watching ads on TV.

Table 29. Crosstab Table for drinking and driving and reading alcohol ads in print

	Occasionally DD	Seldom or Never DD
Read Print		
Yes	16	13
No	6	16
Total	22	29

Again, drinking and driving was divided into two classifications: those who drink and drive "occasionally," and those who "seldom" or "never" drink and drive. Drinking and driving and reading alcohol advertisements were found to be significant at the .05 level. Sixteen (31.3 percent) of the respondents said "yes" they read alcohol ads and drink and drive "occasionally," while 13 (25.4 percent) of the respondents said "yes" they read alcohol ads but "seldom" or "never" drink and drive. Only six (11.7 percent) of the respondents said "no" they do not read alcohol advertisements but "occasionally" drink and drive, while 16 respondents (31.3 percent) said "no" they don't read alcohol ads and "seldom" or "never" drink and drive. The hypothesis was accepted at the .05 level (chi-square=3.96, df=1, one-tail test needs 2.71, p=.05).

Table 30. Crosstab Tables for drinking and driving and watching alcohol ads on TV

	Occasionally DD	Seldom or Never DD
<hr/> Watch TV Ads <hr/>		
Yes	14	12
No	8	18
Total	<hr/> 22 <hr/>	<hr/> 30 <hr/>

It was found that there is definitely a relationship between watching alcohol commercials and drinking/driving. Fourteen respondents (26.9 percent) said "yes" they watch alcohol advertising and "occasionally" drink and drive, while 12 respondents (23 percent) said "yes" they watch alcohol advertising on TV, but "seldom" or "never" drink and drive. Eight respondents (15.3 percent) said "no" they do not watch alcohol ads on TV, but they do "occasionally" drink and drive, while 18 respondents said "no" they do not watch alcohol commercials on TV, and they "seldom" or "never" drink and drive. Again, the hypothesis was accepted at the .05 level ( $\chi^2=2.83$ ,  $df=1$ , one-tail test needs 2.71,  $p=.05$ ).

As might be expected, teenagers do pay close attention to alcohol advertisements in the media, but it doesn't mean that their attitudes toward drinking and driving are influenced by the ads. Another finding is that more respondents read alcohol ads in print rather than watching them on television. This could very well mean that more teenagers today are reading more and watching less television. A reason why the respondents

could have read more alcohol ads in print is because they have more access to print rather than television. Most magazines carry a full-color alcoholic beverage ads. Some newspapers carry alcohol beverage advertising, and there are many billboards today advertising alcohol. Basically, teenagers see these ads practically every day. As far as television is concerned, most teenagers probably do not watch television outside of their homes.

#### Results using Pearson Correlation Coefficients

The researcher hypothesized that heavy drinkers have a higher recall of alcohol advertisement slogans than non-drinkers, and he suspected that heavy drinkers would tend to say that they pay close attention to alcohol slogans, but they aren't influenced by these slogans.

Table 31. Correlations for drinking, reading slogans, and influence

	CONALCO	SLOGAN	INFLUENCE
CONALCO	1.0000	.1011	-.803
SLOGAN	.1011	1.0000	-.3300
INFLUENCE	-.0803	-.3300	1.0000

Using a Pearson Correlation, it was found that heavy drinking correlated positively but not significantly with alcohol slogans. The heavy drinking variable and the slogan variable, (62 cases), had a positive coefficient of .1011. There is definitely no significant

relationship between the two variables. This means that respondents who were heavy drinkers were no more likely to recall alcohol slogans than respondents who were infrequent drinkers or non-drinkers.

It was also found that slogans had a negative but not significant correlation with influence. The slogan variable and the influence variable, (62 cases), had a negative coefficient of  $-.3300$ . The more the respondents listen or read alcohol slogans in the media, the likely they are to say that they are influenced by the slogans.

## CHAPTER VI. CONCLUSIONS

It is difficult to judge the accuracy of the findings in this study because of the small sample size. Nevertheless, it is possible to conclude that there appears to be a relationship between drinking and driving. It may not be as strong as one might expect, but the results suggest that alcohol advertisements affect teenagers' attitudes and behaviors regarding drinking and driving to a certain extent. This doesn't necessarily mean that they are influenced to drink and drive by the ads, but two variables are definitely related.

For example, 42 respondents said that they do drink and drive, and over half of the respondents said that alcohol advertisements have some influence on American society encouraging alcoholism. Ten respondents felt that alcohol advertisements had some influence on encouraging them to drink and drive. The percentages for this specific question was low, but it does indicate a relationship.

In conclusion, the more teenagers pay close attention to alcohol ads in the media, the more likely they are to drink and drive, especially if they are already drinkers. It appears that most alcohol slogans attract the attention of teenagers by introducing alcohols that are new on the market or alcoholic beverages that they are familiar with. Therefore, if they drink, they are likely to try a new brand based on what has been advertised.

### Summary

This study seeks to determine if teenagers who drink are more aware of alcohol advertising than teenagers who do not drink; if teenagers with a high awareness of alcohol advertisements are inclined to drink and drive; if drinkers have a higher recall of alcohol advertisement slogans than students who do not drink; and, if drinkers tend to pay close attention to alcohol advertisements, but say they are not influenced by the ads.

A self-administered questionnaire and an advertising recall study was the means for data collection. The tests were administered on January 30, 1985, to juniors at Ames High School who were taking physical education. For the purpose of the advertising recall study, the students were divided into two groups: an experimental group and a control group. The experimental group consisted of 31 students and the control group consisted of 32 students. There was approximately the same number of males and females in each group.

The experimental group was given a copy of the October 10, 1985, issue of Rolling Stone Magazine. They were given twenty minutes to examine the contents in the magazine. After twenty minutes, the magazines were collected. They were shown a series of 21 advertisements on a slide projector from the magazine. Each ad in the magazine did not reveal the name of the product or service in the copy, headline, or on the label of the product. Each place where the name appeared was whited out. The purpose of that was to see if the students could identify the specific



advertisers featured in each ad. A whited out space contained a number, and the students were asked to fill in the numbered space if they could identify the product or service. After the completion of the ad recall study, the students were then administered a four page questionnaire.

The control group was shown the same slides, but they weren't given the magazine to examine. The same procedure applied to the control group. After the ad recall study was completed, the students were administered the questionnaire.

After the data were collected from the recall study and the questionnaire, the information was coded, and some variables were recoded. The data were uploaded into a Zenith 200 modem to be analyzed. The hypotheses were tested by frequencies, correlations, and crosstab tables. Chi-squares were computed to determine if the findings were significant.

It was found that there is a relationship between drinking and driving and alcohol advertising. Regarding the ad recall study, the experimental group was able to identify more alcohol ads than the control group. For example, 62.5 percent of the experimental group could identify 5 to 8 ads, while only 32.2 percent of the control group could identify 5 to 8 ads. It was also found that there was no difference between the number of males who could identify the ads and the number of female who could identify the ads.

Drinking and driving and reading or listening to alcohol advertisements in the media proved to be related. These variables were found to be

significant at the .05 level when crosstab tables were drawn. This doesn't determine whether teenagers are influenced by alcohol advertisements, but it does mean that they have something in common.

Through the use of crosstabs, drinking and driving and reading alcohol advertisements in newspapers, magazines, billboards, etc., was found to be related. Again, this doesn't mean that alcohol ads in the media influence teenagers to drink, but the ads could contribute to drinking and driving to a certain extent. Drinking and driving was also crosstabulated with watching alcohol ads on TV. It was found to be significant at the .05 level.

Using a Pearson correlation, it was found that heavy drinking was positively correlated with alcohol slogans. However, there was no significant relationship found between the two variables. Because a person is a heavy drinker doesn't mean that he will be able to identify more alcohol slogans than a person who doesn't drink.

Also, it was found that slogans had a negative correlation with influence. The slogan variable, with 62 cases, had a negative coefficient of  $-.3300$ . It was found significant at the .005 level. The more teenagers listen to or read alcohol slogans in the media, the more likely they are to say that they are influenced by those slogans.

#### Future study

Although some of the questions were not specifically used in this study, the answers to those questions can still be useful in

further research. There is indeed a need for further study in this area because of the limitation of the research.

Since alcohol advertising is believed to have an effect on teenagers attitudes toward drinking and driving, it is possible to do a study using basically the same procedure with other high school classes to see if the alcohol advertisement recall study was due in fact to the rise in teenagers drinking and driving or because the experimental group was given the copy of Rolling Stone Magazine. Thus, the experimental group scored higher, while the control group which did not look at the magazine scored lower. Did this group have a lower recall of the ads because it was given the memory jogger (Rolling Stone Magazine)? Also, were there more respondents in the experimental group who either had: 1) better recall capabilities, 2) watched a lot of TV and saw these ads and/or read Rolling Stone Magazine and were familiar with these ads?

It would be interesting to see the results if the ads recall survey were administered to the sample as a whole instead of breaking it up into an experimental group and a control group. This would basically determine how much the sample as a whole knows about alcohol advertisements. Rolling Stone Magazine was a good choice to use for this study because many of the respondents said they read it often. Other magazines can be examined to see if the primary audience is teenagers, if so, they should be used also.

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**APPENDIX A. ALCOHOL ADVERTISING INSTRUMENT AND QUESTIONNAIRE**

## Ad Recall Survey

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_
11. \_\_\_\_\_
12. \_\_\_\_\_
13. \_\_\_\_\_
14. \_\_\_\_\_
15. \_\_\_\_\_
16. \_\_\_\_\_
17. \_\_\_\_\_
18. \_\_\_\_\_
19. \_\_\_\_\_
20. \_\_\_\_\_
21. \_\_\_\_\_

ALCOHOL USAGE QUESTIONNAIRE

"RESULTS ARE COMPLETELY CONFIDENTIAL-----NO NAMES PLEASE"

1. Sex: Male Female (Circle One)
2. Age: 15 16 17 18 (Circle One)
3. If you consume alcoholic beverages, about how often do you drink them? (Check one answer)
 

<input type="checkbox"/> Don't drink	<input type="checkbox"/> 3-4 times a week
<input type="checkbox"/> Once a month	<input type="checkbox"/> Almost every day
<input type="checkbox"/> Every other week	<input type="checkbox"/> Stopped drinking
<input type="checkbox"/> Once a week	<input type="checkbox"/> Don't know

IF YOU DON'T DRINK AT ALL, SKIP TO QUESTION 8

What alcoholic beverages do you prefer? For each of the choices given please circle which one you favor most.

- |                                  | Strongly<br>Prefer | Prefer | Don't<br>Know | Do Not<br>Prefer | Strongly<br>Dislike |
|----------------------------------|--------------------|--------|---------------|------------------|---------------------|
| 4. Beer                          | 1                  | 2      | 3             | 4                | 5                   |
| 5. Wine(including<br>coolers)    | 1                  | 2      | 3             | 4                | 5                   |
| 6. Hard liquor<br>(mixed drinks) | 1                  | 2      | 3             | 4                | 5                   |
| 7. Hard liquor<br>(Straight)     | 1                  | 2      | 3             | 4                | 5                   |
8. Please circle your best guess: how many 12-ounce cans of beer can a 17-year-old who weighs 140 pounds consume before his ability to drive is affected? (Please check your best guess)
 

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ more than 6   ☐ don't know
  9. Please circle your best guess: how many 5-ounce glasses of wine can a 17-year-old who weighs 140 pounds consume before his ability to drive is affected? (Please check your best guess)
 

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ more than 6   ☐ don't know

10. Please circle your best guess: how many 1-ounce glasses of straight can a 17-year-old who weighs 140 pounds consume before his ability to drive is affected? (Please check your best guess)

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ more than 6 ☐ don't know

11. Do you have a valid driver's license? (Circle One) Yes No  
If no, learner's permit? Yes No

12. What car do you drive most often?

☐ own ☐ friend's ☐ do not drive  
☐ family's ☐ other

13. Have you ever had a ticket for a moving violation? (Check One)  
☐ more than one ☐ one ☐ never

IF YOU DO NOT DRINK, SKIP TO QUESTION 18

14. Have you ever been the passenger in a car where the driver had been drinking? (Circle One) Yes No

15. Do you yourself ever drive a car after you've been drinking?  
☐ occasionally ☐ seldom ☐ never

16. How often in the last 12 months would you say you have driven within an hour after you had been drinking any kind of alcohol (even one drink)?

☐ never ☐ twice a month  
☐ 1-2 times ☐ once a week  
☐ 3-4 times ☐ 2-3 times a week  
☐ 5-6 times ☐ every day  
☐ once a month ☐ don't know

17. How often in the last 12 months have you been drinking while riding in someone else's car?

☐ never ☐ twice a week  
☐ 1-2 times ☐ once a week  
☐ 3-4 times ☐ 2-3 times a week  
☐ 5-6 times ☐ every day  
☐ once a month ☐ don't know

18. Do you generally read alcohol advertisement in magazines and newspapers? (Circle One) Yes No

19. Do you you generally pay close attention to alcohol ads on TV? (Circle One) Yes No

20. Do you feel that teenagers would be less inclined to drink if alcohol advertising were banned? Yes No
21. Do you feel that the ads on TV that warn teenagers about the dangers of drinking and driving have an effect on teenagers? (Circle One) Yes No
22. How influential would you say advertising is on American society encouraging them to buy things that they may not even need?  
☐ very influential  
☐ influential  
☐ neutral  
☐ not influential  
☐ not at all influential
23. How influential would you say alcohol advertising is on American society encouraging alcoholism?  
☐ very influential  
☐ influential  
☐ neutral  
☐ not influential  
☐ not at all influential
24. How influential would you say alcohol advertising is as far as encouraging you to drink and drive?  
☐ very influential  
☐ influential  
☐ Neutral  
☐ not influential  
☐ not at all influential
25. Do you think alcohol advertising is one of the many contributing factors of teenage drinking? (Circle One) Yes No

For each phrase, jingle, or slogan, name the product which would be represented in that advertisement. (If you aren't sure, please guess)

26. "Put a little weekend in your week." \_\_\_\_\_  
 A. Heineken D. Old Milwaukee  
 B. Budweiser Light E. Lowenbrau  
 C. Michelob F. Old English 800
27. "For all you do, this \_\_\_\_\_ for you."  
 A. Michelob D. Natural Light  
 B. Busch E. Coors  
 C. Bud's F. Miller's

28. "Weekends are made for \_\_\_\_\_."  
 A. Lowenbrau D. Heineken  
 B. Michelob E. Budweiser  
 C. Old Milwaukee F. Schafer
29. "Bring out the best." \_\_\_\_\_  
 A. Michelob D. Coors  
 B. Budweiser Light E. Milwaukee Best  
 C. Miller F. Mickey
30. "We sell no wine before its time." \_\_\_\_\_  
 A. Carlo Rose D. Blue Nun  
 B. Andre E. Cold Duck  
 C. Paul Masson F. Ernest & Julio Gallo
31. "If you've got the time, we've got the beer." \_\_\_\_\_  
 A. Miller D. Busch  
 B. Natural Light E. Schafer  
 C. Lowenbrau F. Budweiser
32. "It's downright upright." \_\_\_\_\_  
 A. Paul Masson D. Andre  
 B. Ernest & Julio Gallo E. Carlo Rose  
 C. Harvey's Bristol Cream F. Boone's Farm

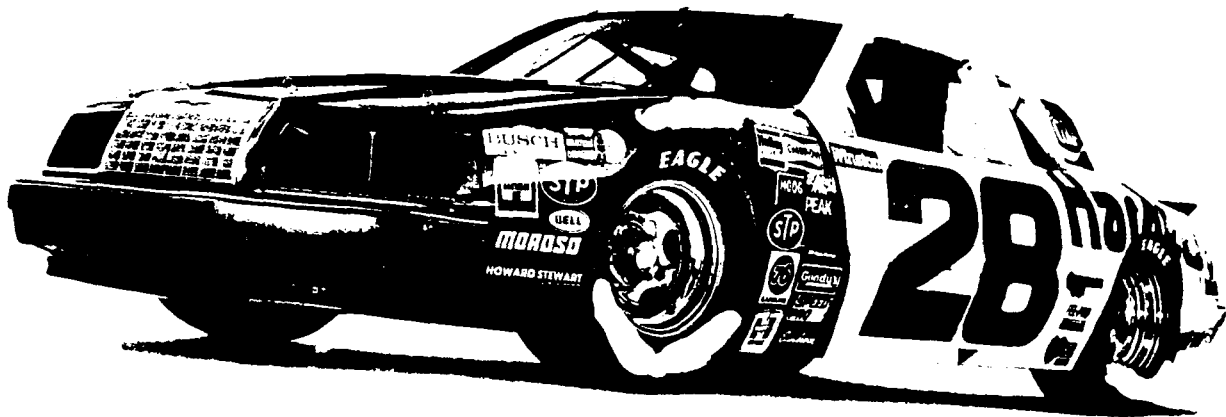
APPENDIX B. HUMAN SUBJECT COMMITTEE

(Please follow the accompanying instructions for completing this form.)

- Signature redacted for privacy



APPENDIX C. ILLUSTRATIONS



**The fact that both of these Thunderbirds  
are on Eagles is no coincidence.**



Every one of the 30 Winston Cup Grand National races last year was won on just one make of tire:

The racing Eagle.

And every one of Ford's high-performance Thunderbird Turbo Coupes this year comes with

just one make of tire: The Eagle VR "Gatorback" street radial.

The success of both of these tires has a common source: ability to engineer better high-performance tires.

For the track, and for the street.

So it's really no coincidence that racing Eagles are winning races all over the country.

Or that Eagle street radials are the fastest selling high-performance tires in America.

In fact, it's no coincidence at all.

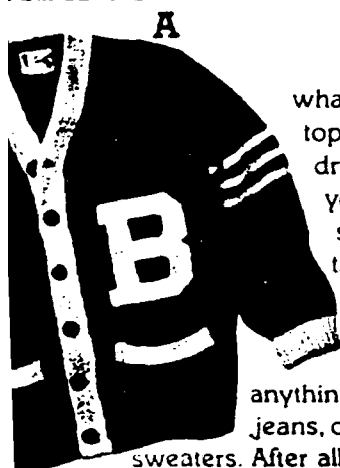
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**EAGLES. ENGINEERED FOR CARS WITH THE PROPER QUALIFICATIONS.**

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# A BABY BOOMERS GUIDE TO

## WHAT TO WEAR WITH



style always matches anything. Except, course, Nehru jackets.

Just grab whatever's on top of the laundry pile. Or, if you want something that's pressed, take it from the bottom. Virtually anything goes - faded jeans, old crew-neck sweaters. After all,

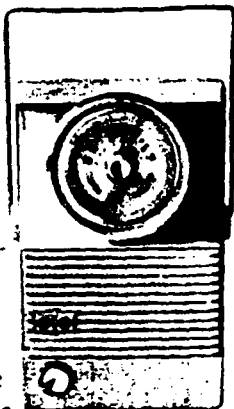


## WHAT TO TALK ABOUT WITH A

Whatever you do, don't discuss stock fluctuations, mortgage payments, certificates of deposit. A light drink for light conversation with strong preference for top 40's esoterica, dogs and flea flickers, vintage sports, and *Dynasty*.

## WHAT TO LISTEN TO WITH A

File away those baby classical masterpieces and bop to classic 45's. Do the swim of Jan and Dean or Surfaris. Reminisce the Hully Gully, the Panky or the Freddie.



# 3.

fresh, light taste will keep your toes tapping all night long. Be Bop A Lu La, we don't mean maybe.

## WHEN TO ENJOY A

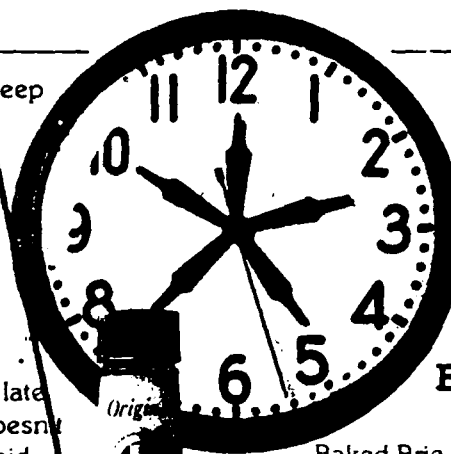
A notoriously late riser (it usually doesn't get moving until mid-afternoon), is nevertheless wonderful company the rest of the day. Sip it anytime, anywhere. Enjoy it on the rocks or on the sand. By a secluded pond or in a crowded pool.



MR. BOSTON®

# TOPS IN

PEACH ORCHARD® STRAWBERRY • APPLE • PEPPERMINT • CINNAMON • CHOCO-MINT® • SPEARMINT  
ENC 1



A great when basking by a glowing T.V. - it's cool, refreshing, quiet, and won't pose moralistic questions during pro-wrestling.

## WHAT TO EAT WITH A

Baked Brie and Pâté de Campagne have their place. But it isn't here. No, an evening with demands humbler snacks, and lots of them. Chomp on some chips. Gnow at some pretzel nuggets. Even nibble at some goldfish. You'll be amazed at how versatile it is. Which, in a nutshell, is the whole idea behind Nutcracker. A Mr. Boston Nutcracker Schnapps.



No. Boston Amaretto 40-50% 100 proof  
Produced by Mr. Boston Creamery Company, Inc.  
Albany, Ga. © 1985






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Two of his favorite things.  
John Keller's Meucci pool cue and his  
"Shrink-to-Fit"

---

It took two hundred games before his new cue felt just right.

But now John will approach a three-combination or a two rail shot without the slightest hesitation. His longest run to 62 straight balls. And the Meucci isn't just a part of his game. It's a part of him. A relationship *that* personal is a long time to develop.

With one notable exception: button-fly

They're made of a legendary denim that shrinks down in the washing machine to fit only you (or—in John's case—only John). Your waist, your thighs, *you*.

For Shrink-to-Fit this takes just three quick turns through the wash. For Pre-Shrunk, only one.

It's like having your jeans custom tailored. For a personal fit no ordinary jeans can match.

To be sure they're authentic, look for the red Tab on the back pocket.

And to be sure it's really John, look for the double bank into the corner pocket.



QUALITY NEVER GOES OUT OF STYLE®

14.

# PROFILE:

## THOMAS B. STEVENS

HOME: Lakewood, Colorado.

AGE: 39

PROFESSION: Harpsichord and clavichord builder.

HOBBY: Skiing. "I didn't move out here from New Hampshire for a change of climate."

LAST BOOK READ: *Drums Along The Mohawk*, Walter Edmonds.

LATEST ACCOMPLISHMENT: Completed his third instrument of 1985. "For somebody in my business, that's high-speed production."

WHY I DO WHAT I DO: "I love music, but I've always been better at building things. For me, this is really the best of both worlds."

QUOTE: "Louder may get you heard first, but it doesn't guarantee you'll play something worth hearing."

PROFILE: Individualistic, but very respectful of tradition. "Low-tech is a lot more sophisticated than people think."

### HIS SCOTCH:

"On the rocks. What could be more 'well-tempered' than that?"



# THE RICHNESS OF DARK BEER. THE SMOOTHNESS OF [REDACTED]

[REDACTED] invites you to enjoy an exceptional dark beer. [REDACTED] Classic Dark.<sup>®</sup>

It's a rare combination of the robust flavor of dark beer with the classic smooth and mellow taste that comes from one beer alone. [REDACTED]

WHERE YOU'RE GOING, IT'S [REDACTED]

*Classic* DARK  
BEER



*Classic* DARK.

15.